



Environmental Education for Everyone

Webinar on the EPA's K-Grey
Educational Resources

April 17, 2012



Outline

- EPA's Office of Environmental Education
- EE Resources – Our philosophy
- EPA Program Offices: Educational Resources
 - Resource Options: Lesson Plans, Homework, Activities & Games, Public information & Interactive web tools
- K-Grey Resources
- A Look at the Office of Environmental Education's Resources Online



The Office of Environmental Education:

<http://www.epa.gov/education>

- National Environmental Education Act
 - Grants
 - Student Awards (PEYA)
 - Teacher Awards (PIAEE)
 - National Environmental Education Advisory Committee
 - EE training agreement with Cornell University
 - **EE resources** for formal and informal educators/students/public



Office of Environmental Education Website

A screenshot of the EPA's Environmental Education (EE) website. The page has a blue header with the EPA logo and navigation links: "LEARN THE ISSUES", "SCIENCE & TECHNOLOGY", "LAWS & REGULATIONS", and "ABOUT EPA". There are also links for "Advanced Search" and "A-Z Index". The main content area is titled "Environmental Education (EE)" and includes a paragraph about its purpose. Below this are four main sections: "Environmental Education Grants", "Teacher Awards", "Resources for Educators", and "Resources for Students". Each section has a list of links and a small image. On the right side, there is a "Upcoming Events" section with details for "April 15 - 21 - Environmental Education Week" and "April 16 - The White House Summit on Environmental Education". At the bottom, there is a footer with links to "EPA Home", "Privacy and Security Notice", "Contact Us", and "WCMS", along with icons for "News by E-mail", "EPA Mobile", "Widgets", "News Feeds", and "Podcasts".

EPA United States Environmental Protection Agency

Advanced Search A-Z Index

LEARN THE ISSUES SCIENCE & TECHNOLOGY LAWS & REGULATIONS ABOUT EPA

Environmental Education (EE)
Environmental education increases public awareness and knowledge about environmental issues or problems. In doing so, it provides the public with the necessary skills to make informed decisions and take responsible action. A primary desired outcome of environmental education programs is *environmental literacy*.

Environmental Education Grants

- Learn about EE grants and how to apply
- Frequently asked questions

Teacher Awards

- Learn about the Presidential Innovation Award for Environmental Educators
- Frequently asked questions

Resources for Educators

- EE in Action webinars for educators (April 17-19, 2012)
- Lesson plans and resources for K-12 teachers
- National Environmental Education Training Program
- EE publications

Resources for Students

- President's Environmental Youth Award for K-12 students
- Games and activities for K-12 students
- Fellowships for college and post-graduate students
- onCampus EcoAmbassadors for college students

Contact the EE Web editor to ask a question, provide feedback, or report a problem.

Upcoming Events

April 15 - 21 - Environmental Education Week [Visit Event Website](#)
This year's theme, **Greening STEM: The Environment as Inspiration for 21st Century Learning**

April 16 - The White House Summit on Environmental Education
Education will bring together a diverse collection of EE stakeholders both old and new to expand the conversation on environmental education.

April 17 - 19 - EE in Action Webinars for Educators

Related Topics

- National Environmental Education Act
- National Environmental Education Advisory Council
- National Environmental Education Foundation (NEEF) [Visit Event Website](#)
- Other EPA grants programs

EPA Home | Privacy and Security Notice | Contact Us
WCMS
Last updated on Tuesday, April 17, 2012

News by E-mail EPA Mobile Widgets News Feeds Podcasts



Our Philosophy

EPA EE Resources Should:

- Connect students & residents with their communities
- Address real world & local problems
- Encourage stewardship activities
- When appropriate, be place-based, experiential, outdoors



Our EE resources also strive to:

- Be interdisciplinary and integrative: Flexible to use in a variety of classes & subjects
- Be relevant and responsive to local issues & current events
- Utilize creative and critical thinking



EPA's Program Offices:

<http://www.epa.gov/aboutepa/organization.html>

Jackson EPA History EPA Organization Chart Greening EPA Facilities Mailing Addresses Senior Manager Schedules Staff Directory Visiting Headquarters Visiting a Regional Office What We Do	Office of the Administrator 202-564-4706 About AO			
	Headquarters offices:			
	Office of Administration and Resources Management 202-564-4800 About OARM	Office of Air and Radiation 202-564-7404 About OAR	Office of Chemical Safety and Pollution Prevention 202-564-2902 About OCSPP	Office of the Chief Financial Officer 202-564-1151 About OCFO
	Office of Enforcement and Compliance Assurance 202-564-2440 About OECA	Office of Environmental Information 202-564-6863 About OEI	Office of General Counsel 202-564-8040 About OGC	Office of Inspector General 202-566-0847 About OIG
	Office of International and Tribal Affairs 202-564-6800 About OITA	Office Research and Development 202-564-6820 About ORD	Office of Solid Waste and Emergency Response 202-566-0200 About OSWER	Office of Water 202-564-5700 About OW
	Regional offices around the nation:			
	Region 1 / Boston 617-918-1010 About Region 1	Region 2 / New York 212-637-5000 About Region 2	Region 3 / Philadelphia 215-814-2900 About Region 3	Region 4 / Atlanta 404-562-8317 About Region 4
	Region 5 / Chicago 312-886-3000 About Region 5	Region 6 / Dallas 214-865-2200 About Region 6	Region 7 / Kansas City 813-551-7006 About Region 7	Region 8 / Denver 303-512-6108 About Region 8
	Region 9 / San Francisco 415-947-6702 About Region 9	Region 10 / Seattle 206-553-1234 About Region 10		



EPA Headquarters Offices:

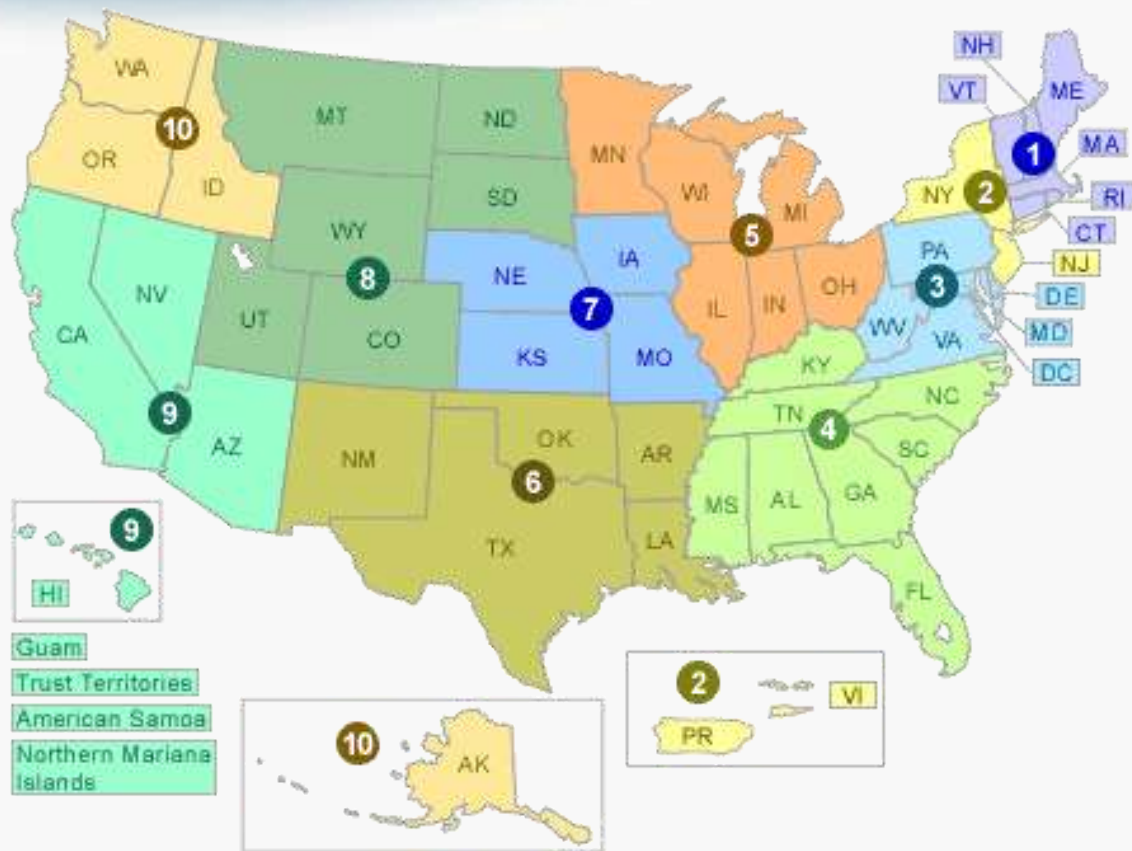
- **Office of Air & Radiation**
- **Office of Chemical Safety & Pollution Prevention**
- Office of the Chief Financial Officer
- Office of Enforcement & Compliance Assurance
- Office of Environmental Information
- Office of General Counsel
- Office of Inspector General
- Office of International & Tribal Affairs
- **Office of Research & Development**
- **Office of Solid Waste & Emergency Response**
- **Office of Water**



The EPA also has 10 Regional Offices around the country. Each Region has an EE Coordinator.

Regional Offices:

- Region 1: Boston, MA
- Region 2: New York, NY
- Region 3: Philadelphia, PA
- Region 4: Atlanta, GA
- Region 5: Chicago, IL
- Region 6: Dallas, TX
- Region 7: Kansas City, KS
- Region 8: Denver, CO
- Region 9: San Francisco, CA
- Region 10: Seattle, WA



<http://www.epa.gov/aboutepa/where.html>



Program Office Web Resources:

- **Office of Air & Radiation:**

- <http://www.epa.gov/air/> : Links for youth & Educational resources

- OAR also includes Climate Change Information:

- <http://www.epa.gov/climatechange/>

- **Office of Chemical Safety & Pollution Prevention:**

- <http://www.epa.gov/aboutepa/ocspp.html>

- **Office of Research & Development:**

- <http://www.epa.gov/research/>

- <http://www.epa.gov/aboutepa/ord.html>

- **Office of Solid Waste & Emergency Response: (Recycling)**

- <http://www.epa.gov/aboutepa/oswer.html>

- <http://www.epa.gov/epawaste/index.htm> : Links for youth & Ed. Materials

- **Office of Water:**

- <http://water.epa.gov/>

- <http://water.epa.gov/learn/> :Links for Ed. Resources, Youth & training



Education Resources from Program Offices

Office of Water Website

Water Resources for Youth



Climate Change Resources:

<http://www.epa.gov/climatechange/kids/index.html>

The screenshot shows the homepage of the EPA's "Global Climate Change" student guide. At the top left is the EPA logo, followed by the text "a student's guide to" and the main title "GLOBAL CLIMATE CHANGE" in large green letters. Below the title are four colored buttons: "Learn the Basics" (green), "See the Impacts" (orange), "Think Like a Scientist" (blue), and "Be Part of the Solution!" (purple). In the center is a video player with a play button and the text "Play the video to learn more." To the right of the video is a "SHARE" button. Below the video is a large image of four diverse students (two boys and two girls) standing on a beach, looking out at the ocean. One boy is holding binoculars, and another is holding a camera. To the left of the students is a red button that says "TAKE A CLIMATE CHANGE EXPEDITION!" with a "Join us!" link. To the right of the students is a green speech bubble that says "CALCULATE YOUR EMISSIONS" with a "Start" link. At the bottom right, there is a purple box with the text "did you know?" and "Worldwide, 2000-2009 was the warmest decade ever recorded." At the very bottom is a navigation bar with links: Home | Expedition | Glossary | Educator Resources | References | Frequently Asked Questions | Calculator | Contact Us.



Many EE options are available at EPA:

1. Lesson plans for educators & parents
2. Homework/classroom help
3. Science experiments
4. Games and activities



Lesson Plans

- Outlines what the teacher needs in order to teach a specific topic
- Includes a background section, materials, and step-by-step instructions
- May include student handouts or worksheets

Mercury Bioaccumulation Tag

<ul style="list-style-type: none">• Grade Level 5-8• Subject Areas Science Health• Duration 15 min for introduction 15 min for activity 15 min for wrap-up• Setting Discussion: Classroom Activity: Outdoors• Skills Gathering data Interpreting data Applying data• Vocabulary Mercury Food chain Bioaccumulation Biomagnification• Related Websites www.epa.gov/mercury www.epa.gov/children	<p>Summary Students will learn about the health effects of mercury. Students will model the processes of bioaccumulation and biomagnification in a food chain.</p> <p>Objectives: Students will:</p> <ul style="list-style-type: none">• Understand how mercury accumulates in an organism and magnifies in a food chain.• Describe the health effects of mercury. <p>Materials:</p> <ul style="list-style-type: none">• Rope or cones to mark boundaries• Colored paper tokens (at least 4 colors), cut into 2x2 inch size• Cups of 4 varying sizes• Pen/paper <p>National Science Content Standards:</p> <ul style="list-style-type: none">• Unifying Concepts and Processes -Systems, order, and organization -Evidence, models, and explanation -Change, constancy, & measurement• Life Science -Structure and function in living systems -Populations and ecosystems• Science in Personal and Social Perspectives -Personal health -Populations, resources, and environments -Risks and benefits <p>Background: Mercury is a naturally occurring element (Hg) found in the Earth's crust. Common uses of mercury have included thermometers and compact fluorescent light bulbs. Mercury is also</p>	<p>present in coal and when coal is burned, it is released into the air. This is the largest anthropogenic source of mercury in the environment in the United States. Other anthropogenic sources of mercury include manufacturing and industrial processes. Natural releases of mercury include volcanoes.</p> <p>Mercury released into the air eventually settles in water or onto land, where it can be washed into water. Once deposited, certain organisms transform it into methylmercury, a highly toxic form that builds up in fish and shellfish. See Figure 1 for a representation of this process.</p> <p>Methylmercury is a neurotoxin, meaning it affects the brain. The group most at risk for adverse health effects from methylmercury are developing fetuses, infants, and children. Methylmercury impairs neurological development and impairs cognitive thinking ability, memory, attention, language, fine motor skills, and visual spatial skills. Methylmercury can have similar impacts on adults, slowing neurological processes.</p> <p>Methylmercury is taken up by tiny aquatic plants (plankton) and animals (zooplankton). These organisms are eaten by larger organisms, such as fish, and the concentration of methylmercury increases at each level of the food chain. For example, a large fish will have a higher concentration of methylmercury than a fish lower on the food chain. Top-level consumers have higher concentrations than low-level consumers and producers. For an</p>
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The EPA logo is located at the bottom right of the page, featuring a stylized flower with three leaves and a sun-like symbol above it, all in green and blue.



Science Experiments

- Similar to lesson plans
- Step-by-step procedures for both teachers and students
- Incorporates & interprets EPA research
- Use easily obtained or common classroom materials

Games & Activities



OSW's Planet Protectors



OPPT's Chemicals Around Your House Tour



K through Grey

- EE is not just about K-12 students -even though this is an important demographic
- Our goal is to share EPA content from K through Grey
- Other priorities include working with other offices:
 - America's Great Outdoors <http://americasgreatoutdoors.gov/>
 - Aging Initiative www.epa.gov/aging
 - Faith-based Communities <http://www.epa.gov/fbnpartnerships/>
 - Environmental Justice <http://www.epa.gov/compliance/environmentaljustice/index.html>
 - OnCampus ecoAmbassadors <http://www.epa.gov/ecoambassadors/oncampus/>
 - Informal Educators and Associations, NEEF: www.neefusa.org



Student Page

<http://www.epa.gov/students/>

A screenshot of the EPA's "Students K-12" webpage. The header includes the EPA logo, navigation links for "LEARN THE ISSUES", "SCIENCE & TECHNOLOGY", "LAWS & REGULATIONS", and "ABOUT EPA", and a search bar. The main banner features a collage of images related to Earth Day 2012, with the text "Earth Day 2012 ... the Earth is in your hands". Below the banner, the page is organized into three columns: "Students K-12" with a "Slimy Quiz" and "Homework Resources"; "Educators and Parents" with "Teacher Resources" and "Climate Change Education"; and "News and Deadlines" with information about "National Environmental Education Week" and the "Clean Water Act".



Teacher Page

<http://www.epa.gov/students/teachers.html>

A screenshot of the EPA website's "Teacher Resources and Lesson Plans" page. The page has a blue header with the EPA logo and navigation links: "LEARN THE ISSUES", "SCIENCE & TECHNOLOGY", "LAWS & REGULATIONS", and "ABOUT EPA". Below the header is a "Students" sidebar with links like "Students Home", "Games", "Homework Resources", "Community Service", "Teacher Resources", "Earth Day", "Environmental Education", and "Awards and Contests". The main content area is titled "Teacher Resources and Lesson Plans" and includes a "You are here" breadcrumb trail: "EPA Home » Students » Teacher Resources". It lists "EPA Resources" and "External Resources" with bullet points for topics like Air, Climate Change, Ecosystems, Energy, Health, Reduce/Reuse/Recycle, and Water. There is also a photo of two students working together. At the bottom, there are sections for "Air", "AIRNOW", and "Breathing Room".



Resources for Young Children


Wastes - Educational Materials

U.S. ENVIRONMENTAL PROTECTION AGENCY

Recent Address | Contact Us Search: All EPA This Area Go

You are here: EPA Home > Wastes > Educational Materials > Kids > Planet Protector's Club > Planet Protector's Coloring Book

Planet Protector's Coloring Book



The image shows the cover of the "Planet Protector's Coloring Book" and a corresponding illustration. The cover is blue with the title "Planet Protector's Coloring Book" in a playful font. It features a palette icon and buttons for "Random auto color", "Reset", and "Instructions". The illustration depicts two children, a boy and a girl, wearing hats and holding tools, standing on a globe. The globe is labeled "Planet Protector's Club".

Random auto color
Reset
Instructions

[EPA Home](#) | [Privacy and Security Notice](#) | [Contact Us](#)

<http://www.epa.gov/epaosdp/education/kids/club/index.html>
Direct Link

Last updated on Tuesday, September 20, 2011



U.S. Environmental Protection Agency



Resources for High School





Resources for Adults/Aging

About AIRNow | AIRNow Partners | FAQs | Contact Us

Search: Go

LOCAL AIR QUALITY CONDITIONS AND FORECASTS

Zip Code: Go State: Alabama Go

[U.S. Air Quality Summary \(Text\)](#)

Older Adults and Air Quality

As people age, their bodies are less able to compensate for the effects of environmental hazards. Air pollution can aggravate heart disease and stroke, lung diseases such as chronic obstructive pulmonary disease and asthma, and diabetes. This leads to increased medication use, more visits to health care providers, admissions to emergency rooms and hospitals, and even death.

Ozone and Particulate Matter (PM) (especially smaller, fine particle pollution called PM_{2.5}) have the greatest potential to affect the health of older adults. Fine particle pollution has been linked to premature death, cardiac arrhythmias and heart attacks, asthma attacks, and the development of chronic bronchitis. Ozone, even at low levels, can exacerbate respiratory diseases.

The EPA Aging Initiative has developed fact sheets that are intended to inform older adults and their caregivers about environmental health risks and take steps to reduce those risks.



Fact Sheets

(Available in English, Arabic, Chinese, Haitian Creole, Korean, Portuguese, Russian, Spanish, Vietnamese)

- [Age Healthier, Breathe Easier](#)
- [It's Too Warm Here - Planning for Excessive Heat Events](#)
- [Information for Older Adults and Family Caregivers](#) [More...](#)
- [Environmental Hazards: Watch Heat on the Head](#)

Aging Posters

- [Breathe Heat! - 8 Simple Steps for Older Adults](#) (CHWS, 1 p., PDF: [view PDF](#))
- [Age Healthier Breathe Easier poster](#) (4-1000, 1 p., PDF: [view PDF](#))

More Information

[EPA's Aging Initiative Website](#)

This page was last updated on Monday, August 30, 2010

QUICK LINKS		
Air Quality Action Days / Alerts	Monitor Maps	School Flag Program
AirCompare	Movies	Smoke from Fires
Air Quality Index (AQI)	NAQ Conferences	Students
Calculator: AQI to Concentration	NOAA	Teacher's Workshop
Calculator: Concentration to AQI	Older Adults	Resources



Resources for Older Adults



- Aging Initiative Home
- Basic Information
- Frequently Asked Questions
- National Agenda
- Public Listening Sessions
- Resources
- Fact Sheets
- Intergenerational Activities
- Calendar
- Grants
- EPA Recursos en Español
- Iniciativa para los Ancianos
- News & Events
- Web Site Comments
- Site Map

[Contact Us](#) [Search](#) [All EPA](#) [This Area](#) [Go](#)

You are here: [EPA Home](#) > [Aging Initiative](#)

Aging Initiative Home

Text Size: [Default](#) [Bigger](#) [Smaller](#)

Quick Finder

Asthma/CPD Fact Sheets	Climate Change Floods	Earth Day Grants	Extreme Heat
Healthy Communities Order Form	Intergenerational Tips To Save the Environment	Rachel Carson Contest Women	Heart Disease Sustainable Communities
			More

Welcome to EPA's Aging Initiative Website. The website provides a wealth of information about the Agency's efforts to protect the environmental health of older persons.

The United States is rapidly aging. In 2010, the population 65 and older totaled 40.3 million (13% of the population). By 2030, the number of older persons is expected to increase to more than 72 million (20%). [Read more about the Aging Initiative.](#)

Fact Sheets

- [Age Healthier, Breathe Easier](#)
- [Building Healthy Communities for Active Aging](#)
- [Carbon Monoxide Poisoning Prevention](#)
- [Diabetes and Environmental Hazards](#)
- [Effective Control of Household Pests](#)
- [Environmental Hazards Weigh Heavy on the Heart](#)
- [Health Effects of Ultraviolet Radiation](#)
- ["It's Too Damn Hot" - Planning for Excessive Heat](#)
- [Water Works](#)
- [Women and Environmental Health](#)

Fact Sheet Translations:

<ul style="list-style-type: none">Arabic العربيةArmenian ArmenianChinese Simplified 简体中文Chinese Traditional 繁體中文French FrançaisHaitian Creole Kreyòl AyisyenHindi हिन्दीItalian Italiano	<ul style="list-style-type: none">Japanese 日本語Korean 한국어Polish PolskiPortuguese PortuguêsRussian РусскийSpanish EspañolTagalog TagalogThai ไทยVietnamese Tiếng Việt
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Other Types of Fact Sheets:

[Click here to join the "Aging Initiative" Listserv!](#)

[April 2012 Aging Initiative List Server Message](#)

[Archived Listserv Messages](#)



**Help Us to Shape the Future:
A National Agenda for the
Environment and the Aging**

Events

[2012 Calendar of Events](#)

Save the Date

NEW! Paying the Price with Our Health:
Community Strategy Conference on Clean Air & Better Health
[Los Angeles, CA - May 2-3, 2012](#)

NEW! Healthy Environments Across Generations
[New York City - June 7-8, 2012](#)



Let's take a look at EPA's website and how to find more resources we have to offer!



Thank you for listening!

Questions?